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PATENT APPLICATION

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: Q64768

Herve GAUDILLAT

Appln. No.: 09/871,816

Group Art Unit: 2664

Confirmation No.: 1966

Examiner: John Shew

Filed: June 4, 2001

For: METHOD OF MANAGING A TELECOMMUNICATION NETWORK AND A
NETWORK MANAGEMENT UNIT FOR IMPLEMENTING THE METHOD

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

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U.S. Application No.: 09/871,816

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I. REAL PARTY IN INTEREST

Based on information supplied by Appellant and to the best knowledge of the Appellant's legal representative, the real party in interest is assignee ALCATEL, by virtue of an assignment executed by the Appellant on April 11, 2001, and submitted for recordation to the assignment Branch of the U.S. Patent and Trademark Office on June 4, 2001. The assignment is recorded at Reel 011877, Frame 0890.

II. RELATED APPEALS AND INTERFERENCES

To the best of the knowledge and belief of the Appellant, the assignee and the undersigned, there are no other appeals or interferences before the Board of Appeals and Interferences that will directly affect or be affected by the Board's decision in the present appeal.

III. STATUS OF CLAIMS

This is an appeal from the Examiner's final rejection of claims 1-8 dated April 27, 2005.

Claims 1-8 are all the claims pending in the application.

Claims 1 and 7 were amended in an Amendment under 37 C.F.R. § 1.111, filed
January 31, 2005.

Claims 1-8 are set forth in their entirety in Appendix A attached to this Brief on Appeal.

IV. STATUS OF AMENDMENTS

No amendments have been filed subsequent to the final rejection dated April 27, 2005. Therefore, all amendments to the claims, which have been made during the prosecution of the present application, have been entered.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention relates to a telecommunication network management method and a network management unit for implementing the method which applies to managing the availability and use of physical resources. (*See specification pg. 1, lines 9-11*).

Managing a telecommunication network requires an information system able to supply knowledge of physical resources, namely the resources of network elements (NE), referred to as nodes, their termination points and the properties of their termination points. The termination points of the network elements have properties dedicated to connectivity. These properties include the capacity in terms of bandwidth (input bandwidth, output bandwidth) as well as the maximum number of swithpaths and the available switchpath identifiers assigned to the termination points of the network elements. (*See specification pg. 1, lines 13-17 and 23-25*).

Conventional network management systems manage the paths/connections between the network elements, but they operate on the principle of real time creation/reservation and suppression. As such, prior art systems are no longer suitable because of the increasing demand for the network capacity and in particular for capacity in terms of bandwidth and the number of switch points. (*See specification pg. 3, lines 10-15*).

The present invention overcomes the drawbacks of the prior art systems by providing all users with a real time view of the resources that are available and that are in use in the short term and the long term. Particularly, the present invention enables periodic or aperiodic reservation of some or all of the capacity offered by a physical telecommunication resource. In an effort to solve the drawbacks of the prior art systems, the present invention provides a method of

managing a telecommunication network including: receiving connection requests, the connections being determined on the basis of parameters contained in the requests and including time parameters; verifying the possibility of setting up the connections in accordance with the parameters, on the basis of a database in which all connections are stored; and updating the database if setting up the connection is possible, wherein the step of receiving connection requests, the step of verifying the possibility of setting up connections, and the step of updating the database are performed by a scheduler program which spans a services management layer and a network management layer. (*See* specification pg. 3, lines 1-2, 26-32; *See also* specification pg. 4, lines 24-26 and Figures 1-2).

To overcome the above drawbacks of the prior art systems, the present invention also provides a telecommunication network management unit including: means for receiving connection requests (e.g. scheduler program (PGA); *See* specification pg. 5, lines 7-11 & Figure 2), the connections being determined on the basis of parameters contained in the requests and including time parameters (*See* specification pg. 4, lines 32-35 & specification pg. 6, lines 5-11); means for verifying the possibility of setting up the connections (e.g. scheduler program (PGA); *See* specification, pg. 5, lines 16-18) in accordance with the time parameters, on the basis of a database (e.g. reservation database BR; *See* specification pg. 5, lines 7-8) in which all connections are stored; means for updating the database accordingly (e.g. scheduler program (PGA); *See* specification pg. 5, lines 7-8 & Figure 2); and means for reserving connections allowing for time parameters (e.g. scheduler program (PGA); *See* specification pg. 6, lines 1-3), wherein the means for receiving connection requests (e.g. scheduler program (PGA); *See* Figure

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1) spans a services management layer and a network management layer. (See also specification pg. 4, lines 8-16, lines 24-26; specification pg. 3, lines 1-2 & Figures 1-2).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Claims 1-8 stand rejected under 35 U.S.C. § 112, ¶1, as failing to comply with the written description requirement.

B. Claims 1-8 stand rejected under 35 U.S.C. § 112, ¶1, as failing to comply with the enablement requirement.

VII. ARGUMENT

Appellant's arguments for patentability are set forth in detail below.

A. Rejection Under 35 U.S.C. § 112, ¶1--Written Description Requirement

The Examiner rejected claims 1-8 under 35 U.S.C. § 112, ¶1, as failing to comply with the written description requirement. Of these rejected claims, only claims 1 and 7 are independent. The exemplary features of claim 1 include, *inter alia*:

wherein the step of receiving connection requests, the step of verifying the possibility of setting up the connections, and the step of updating said database are performed by a scheduler program which spans a services management layer and a network management layer.

In rejecting claim 1, the Examiner alleged that the above-identified requirement "is not disclosed in the specification as to the method in which a scheduler spans a services management layer and a network management layer." (See paragraph 2 on pg. 2 of the Final Office Action dated April 27, 2005). Additionally, on page 2 of the Advisory Action dated August 2, 2005, the Examiner contends that the claims do not comply with the written description requirement because although "Figure 1 shows a PGA located between the [services management layer] SML and [network management layer] NML layers," [t]here is no description in the figure of how this spans the layers," "particularly, which links are used or how resources are allocated or which resource is assigned to which layer." Moreover, the Examiner contends that Figure 2 does not identify any descriptor to any particular layer nor the spanning steps between layers." Contrary

to the Examiner's assertions, Appellant submits that each element of the claims satisfy the written description requirement of § 112, ¶1.

First, one of ordinary skill in the art would readily know and understand how to implement links so that a program, such as the claimed scheduler program, may span the interface of a services management layer (SML) and a network management layer (NML). Manipulation of links, allocation of resources and allocation of resources assigned to particular layers is common knowledge to one of ordinary skill in the art; therefore one of ordinary skill in the art would similarly know how to implement links and allocate resources assigned to particular layers so that a program spans an SML and an NML without requiring explanation.

Second, Appellant submits that there is no *in haec verba*—i.e., word for word—requirement for satisfying the written description requirement. Instead, newly added claim limitations may be supported in the specification through *express, implicit, or inherent disclosure*. (See MPEP § 2163(I)(B)). Additionally, Appellant can show possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive words, structures, figures, diagrams, and formulas that fully set forth the claimed invention.¹ In the present case, Appellant submits that the specification does, indeed, provide sufficient support for the claim limitation “wherein the step of receiving connection requests, the step of verifying the possibility of setting up the connections, and the step of updating said database are performed by a scheduler program which spans a services management layer and a

¹ See *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997); See also MPEP § 2163(I).

network management layer.” In particular, Figure 1 of the present application clearly shows an exemplary non-limiting embodiment of a scheduler program (PGA) which spans the interface of a SML and a NML. Appellant submits that a skilled artisan would clearly understand the manner in which the claimed scheduler program may span the interface of the SML and the NML (as shown in Figure 1) and would not require further explanation.

The concept of layers in data communications is well known.

College textbooks on data and computer communications were replete with descriptions of layering at least back to 1988. Layering is a widely accepted structuring technique, where each layer performs a related subset of the functions required to communicate. As is well known, any given layer relies on the next lower layer to perform more primitive functions and to conceal the details of those functions. It provides services to the next higher layer. Ideally, the layers should be defined so that changes in one layer do not require changes in the other layers.

Since layering in a communications architecture has been taught to college students for decades, Appellant respectfully submits that a layered architecture such as that explained in the BACKGROUND OF THE INVENTION section of the instant application needs no detailed explanation for the artisan of ordinary skill.

The Examiner, however, finds no problem with the three layers mentioned in the application *per se*, but with the idea of some software that spans two layers, as claimed in the claims. Another way to say this is that the claimed invention is “located at the interface of the NML [layer] and SML [layer], as shown diagrammatically in figure 1.” (page 3, lines 1-2 of

Appellant's specification). The Examiner believes that the artisan of ordinary skill could not, as a matter of routine, implement software at the interface of two layers.

The artisan of ordinary skill could certainly implement software that operates between two layers in a layered architecture, and they have been doing so for years, as shown by any number of prior patents, such as USP 6,061,796 to Chen. The application upon which the '796 patent is based dates from 1997. The '796 patent describes a software program that operates between two layers in a layered architecture. In Fig. 5 of the '796 patent, three such programs are shown. Socket shim 50 operates between an authentication layer 20 and a socket layer 22; TDI shim 53 operates between the socket layer 22 and the TDI layer 21; and NSID shim 55 operates between TDI layer 21 and NDIS layer 24. In col. 2, line 45 to col. 3, line 28, there is an explanation of layers, and this explanation (appearing as it does in the Background section) serves as further evidence that layers were well known and understood by the artisan of ordinary skill. In col. 3, lines 53-65, there is a discussion adding a new program between levels so as to minimize modification of the existing levels. The '796 patent calls such a program a "shim". Col. 10, lines 12-13 indicate that shims are well-known.

The '796 patent does not describe how to write such a software module, that spans two different layers, but the explanation of what the module does was sufficient.

It was not necessary, as of 2001, to include in the instant patent application a description of how to put a software module in a location that spans two layers. The artisan of ordinary skill already understood this in 1997 to such an extent that no description was necessary even then.

Based on at least the foregoing reasons, Appellant submits that a skilled artisan would recognize with reasonable clarity that the inventor had possession of the claimed invention at the time the specification was originally-filed as required by § 112, ¶1. (*See* MPEP § 2163).

Accordingly, Appellant respectfully submits that the § 112, ¶1 rejection of independent claim 1 and its dependent claims 2-6 is improper.

Since claim 7 contains features that are similar, though not necessarily coextensive, to the features recited in claim 1, Appellant submits that claim 7 is patentable for reasons similar to those submitted for claim 1. To be specific, Appellant submits that the original specification of the present application provides adequate written description for the claim limitation “wherein the means for receiving connection requests spans a services management layer and a network management layer.” For example, Figures 1 and 2 of the present application clearly show an exemplary non-limiting embodiment of a scheduler program (PGA) capable of receiving connection requests which spans the interface of a SML and a NML. One skilled in the art would know and understand how to implement the claimed scheduler program, such that it spans the interface of a SML and a NML (as shown in Figures 1 and 2) without requiring further explanation. As discussed above with respect to claim 1, skilled artisans have known how to implement links, allocate resources and assign resources to particular layers so that a program, such as the claimed scheduler program, may span a SML and a NML without requiring explanation at least since 1997.

In rejecting claim 7, the Examiner also contends that “Figure 2 does not identify any descriptor to any particular layer.” (*See* pg. 2 of the Advisory Action dated August 2, 2005).

However, Appellant notes that page 5, lines 12-14 of the specification describes that the scheduler “communicates with a database IT of the *NML*.” (*See* Figure 2) (emphasis added). Additionally, page 4, lines 30-35 of the specification describes that the time parameters utilized by the software architecture of Figure 2 are “implemented in the *services management layer*.” (emphasis added). In view at least this disclosure, the Examiner’s contention that Figure 2 does not identify descriptors to any layer is not supportable.

Appellant submits that “[t]he subject matter of the claim need not be described literally (i.e., using the same terms *in haec verba*) in order for the disclosure to satisfy the description requirement” (MPEP § 2163.02) and that a skilled artisan would clearly understand Figures 1 and 2 of the present application without requiring further explanation. One skilled in the art would recognize that the inventor had possession of the claimed invention at the time the specification was originally-filed. Based on at least the foregoing reasons, Appellant submits that the § 112, ¶1 rejection of independent claim 7 and its dependent claim 8 is improper.

B. Rejection Under 35 U.S.C. § 112, ¶1--Enablement Requirement

The Examiner rejected claims 1-8 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Regarding claim 1, the Examiner alleged that claim 1 does not satisfy the enablement requirement because the claim limitation “‘wherein the step of receiving connection requests, the step of verifying the possibility of setting up the connections, and the step of updating said database are performed by a scheduler program which spans a services management layer and a network management layer’ is not disclosed in the specification” and “does not enable one of ordinary skill to determine the method of spanning the

services management layer and the network management layer.” (See paragraph 3 on pg. 3 of the Final Office Action dated April 27, 2005). Similarly, with respect to claim 7, the Examiner alleged that claim 7 does not satisfy the enablement requirement because the claim limitation “‘wherein the means for receiving connection requests spans a services management layer and a network management layer’ is not disclosed in the specification” and “does not enable one of ordinary skill to determine a means of spanning the services management layer and the network management layer.” (See pgs. 3-4 of the Final Office Action dated April 27, 2005). Appellant disagrees.

In order to comply with the enablement requirement of 35 U.S.C. § 112, ¶1 “a claim is supported by the disclosure in an application” if the disclosure “contained sufficient information regarding the subject matter of the [claim] as to enable one skilled in the pertinent art to make and use the claimed invention.” (MPEP § 2164.01). Appellant submits that this rejection is in error for the same reasons discussed above with respect to the § 112, ¶1, rejection of claims 1 and 7 as failing to comply with the written description requirement. In other words, Figures 1 and 2 clearly disclose an exemplary non-limiting embodiment of a scheduler program capable of receiving connection requests which spans the interface of a services management layer and a network management layer. One skilled in the art knows and understands how to manipulate links, allocate resources and assign resources to particular layers so that a program may span two layers in a layered architecture, such as a SML and a NML, and they have been doing so for years. As such, a skilled artisan would understand Figures 1 and 2 of the present application without requiring additional explanation. The specification therefore “is sufficient to permit

those skilled in the art to make and use the invention,” as required by § 112, ¶1. Based on at least the foregoing, Appellant submits that the § 112, ¶1 rejection of independent claims 1 and 7 and their respective dependent claims 2-6 and 8 is improper.

Additionally, Appellant submits that the limitations of claims 1 and 7 does not constitute new matter, as suggested by the Examiner. (*See* pg. 8 of the Final Office Action dated April 27, 2005 & pg. 2 of the Advisory Action dated August 2, 2005).

In particular, support for the claimed “scheduler program which spans a services management layer and a network management layer,” as required by claim 1 can be found at least at lines 1-2 on page 3 of the specification, lines 24-26 on page 4 of the specification, and Figure 1 of the originally-filed application. Similarly, support for the claim limitation “the means for receiving connection requests spans a services management layer and a network management layer,” as required by claim 7 can be found at least at lines 1-2 on page 3 of the specification, lines 24-26 on page 4 of the specification, and Figures 1 and 2 of the originally filed application.

In view of at least the foregoing reasons, Appellant submits that independent claims 1 and 7 (and their respective dependent claims 2, 6 and 8) do not constitute new matter and the rejections of claims 1-8 are improper.

C. Conclusion

It is respectfully requested that the Board of Appeals and Interferences reverse the rejection of claims 1-8 under 35 U.S.C. § 112, ¶1 as failing to comply with the enablement and written description requirements.

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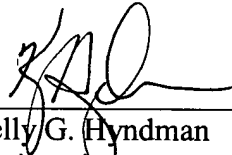
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Unless a check is submitted herewith for the fee required under 37 C.F.R. § 41.37(a) and 1.17(c), please charge said fee to Deposit Account No. 19-4880.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Kelly G. Hyndman
Registration No. 39,234

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: October 19, 2005

CLAIMS APPENDIX

CLAIMS 1-8 ON APPEAL:

1. A method of managing a telecommunication network including:
 - receiving connection requests, said connections being determined on the basis of parameters contained in said requests and including time parameters,
 - verifying the possibility of setting up the connections in accordance with said parameters, on the basis of a database in which all connections are stored, and
 - updating said database if setting up said connection is possible,wherein the step of receiving connection requests, the step of verifying the possibility of setting up the connections, and the step of updating said database are performed by a scheduler program which spans a services management layer and a network management layer.
2. The network management method claimed in claim 1 wherein said time parameters correspond to series of time intervals having a periodic character.
3. The network management method claimed in claim 2 wherein said time parameters take the form of a duration of uses/reservations repeated daily and/or weekly and/or monthly and/or annually.
4. The network management method claimed in claim 1 wherein said time parameters correspond to series of time intervals having an aperiodic character.

5. The network management method claimed in claim 4 wherein said time parameters include data corresponding to an absolute time and a finite or indefinite duration.

6. The network management method claimed in claim 1 wherein the updating of available connections in said database allows for said time parameters.

7. A telecommunication network management unit including:

- means for receiving connection requests, said connections being determined on the basis of parameters contained in said requests and including time parameters,
- means for verifying the possibility of setting up the connections in accordance with said parameters, on the basis of a database in which all calls are stored,
- means for updating said database accordingly, and
- means for reserving connections allowing for time parameters,

wherein the means for receiving connection requests spans a services management layer and a network management layer.

8. The network management unit claimed in claim 7 including means for updating connections in said network according to the content of said database, which contains reservations allowing for time parameters.

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EVIDENCE APPENDIX:

NONE.

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RELATED PROCEEDINGS APPENDIX

NONE.



Sughrue

SUGHRUE MION, PLLC



2100 Pennsylvania Avenue, NW
Washington, DC 20037-3213

T 202.293.7060
F 202.293.7860

www.sughrue.com

Kelly G. Hyndman

T 202-663-7407
kghyndman@sughrue.com

October 19, 2005

VIA EMAIL

(Indra.Courteix@Alcatel.com)

(Fabienne.Wast@Alcatel.com) (Lydia.Rakic@Alcatel.com)

Mr. Sylvain Chaffraix
COMPAGNIE FINANCIERE ALCATEL
Intellectual Property Department
54, rue La Boétie
75008 Paris
FRANCE

Re: U.S. Patent Application No.: 09/871,816
Inventor: Herve GAUDILLAT
Assignee: ALCATEL
Report Filing of Appeal Brief
Your Ref: 102702/SYC/NNAD/SHO
Our Ref: Q64768

Dear Sirs:

In accordance with the instructions in your letter of October 19, 2005, we prepared and filed an Appeal Brief Under 37 C.F.R. § 41.37 and a Submission of Appeal Brief in the above-identified application. Copies of the papers as filed in the U.S. Patent and Trademark Office today are enclosed for your records.

Additionally, please find enclosed our debit note for services and disbursements. We will keep you informed of all further developments with respect to the prosecution of this application. Thank you for allowing us to be of service.

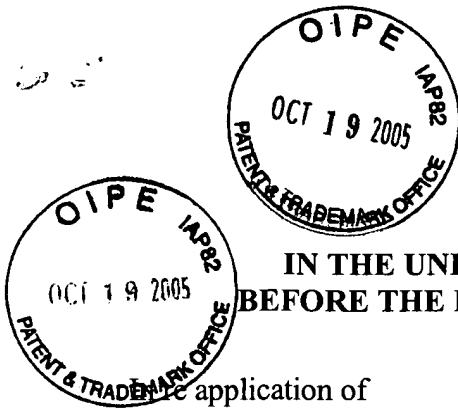
Very truly yours,

Kelly G. Hyndman
Cory C. Davis

KGH/CCD/tss

Enclosures

CONFIRMATION COPY



PATENT APPLICATION

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SUBMISSION OF APPEAL BRIEF

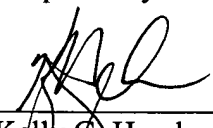
MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. A check for the statutory fee of \$500.00 is attached. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,



Kelly G. Hyndman
Registration No. 39,234

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

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